

ABSTRACT

Spring contact elements are fabricated by depositing at least one layer of metallic material into openings defined in masking layers deposited on a surface of a substrate which may be an electronic component such as an active semiconductor device. Each spring contact element has a base end, a contact end, and a central body portion. The contact end is offset in the z-axis (at a different height) and in at least one of the x and y directions from the base end. In this manner, a plurality of spring contact elements are fabricated in a prescribed spatial relationship with one another on the substrate. The spring contact elements make temporary (i.e., pressure) or permanent (e.g., joined by soldering or brazing or with a conductive adhesive) connections with terminals of another electronic component to effect electrical connections therebetween. In an exemplary application, the spring contact elements are disposed on a semiconductor devices resident on a semiconductor wafer so that temporary connections can be made with the semiconductor devices to burn-in and/or test the semiconductor devices.